

IN THE CLAIMS:

Claim 1. (currently amended) A pigment dispersion, comprising at least a pigment, an aqueous medium, a copolymer resin between a hydrophobic monomer and a hydrophilic monomer, and a urethane resin wherein said copolymer resin has an acid value in a range of 50 to 320, and

wherein said urethane resin has an acid value in a range of 10 to 300.

Claim 2. (currently amended) The pigment dispersion according to claim 1, wherein said copolymer resin and said urethane resin have a weight ratio (former/latter) in a range of  $\frac{1}{2}$  to 2/1.

Claim 3. (original) The pigment dispersion according to claim 1, wherein the content of said copolymer resin is in a range of 10 to 50 parts by weight per 100 parts by weight of said pigment, and the content of said urethane resin is in a range of 10 to 40 parts by weight per 100 parts by weight of said pigment.

Claims 4 and 5 (cancelled)

Claim 6. (currently amended) The pigment dispersion according to claim 3, wherein said copolymer resin and said urethane resin have a weight ratio (former/latter) in a range of  $\frac{1}{2}$  to 2/1.

Claim 7. (previously presented) The pigment dispersion according to claim 1,

wherein said copolymer resin is at least one of a styrene-(meth)acrylic acid copolymer resin, a styrene-methylstyrene-(meth)acrylic acid copolymer resin, a styrene-maleic acid copolymer resin, a (meth)acrylic acid-(meth)acrylic acid ester copolymer resin, and a styrene-(meth)acrylic acid-(meth)acrylic acid ester copolymer resin.

Claim 8. (previously presented) The pigment dispersion according to claim 1, wherein said urethane resin has urethane linkages and/or amide linkages, and acidic groups.

Claim 9. (previously presented) The pigment dispersion according to claim 1, wherein the weight ratio between a solid component of said pigment and non-pigment solid components (former/latter) is in a range of 100/20 to 100/80.

Claim 10. (currently amended) The pigment dispersion according to claim 2 †, wherein the content of said copolymer resin is in a range of 10 to 50 parts by weight per 100 parts by weight of said pigment, and the content of said urethane resin is in a range of 10 to 40 parts by weight per 100 parts by weight of said pigment.

Claim 11. (currently amended) The pigment dispersion according to claim 2 †, wherein said copolymer resin has an acid value in a range of 50 to 320, and said urethane resin has an acid value in a range of 10 to 300.

Claim 12. (previously presented) The pigment dispersion according to claim 1, wherein said copolymer resin has a weight average molecular weight (Mw) in a range

of 2,000 to 30,000, and said urethane resin has a weight average molecular weight (Mw) in a range of 100 to 200,000.

Claim 13. (previously presented) The pigment dispersion according to claim 1, wherein said copolymer resin has a glass transition temperature (T<sub>g</sub>; measured in accordance with JIS K6900) of at least 30°C, and said urethane resin has a glass transition temperature (T<sub>g</sub>; measured in accordance with JIS K6900) in a range of -50 to 200°C.

Claim 14. (previously presented) The pigment dispersion according claim 1, wherein said copolymer resin has a maximum particle diameter of not more than 0.3 μm, and said urethane resin has a maximum particle diameter of not more than 0.3 μm.

Claim 15. (previously presented) The pigment dispersion according to claim 1, wherein said pigment is an organic pigment.

Claim 16. (previously presented) The pigment dispersion according to claim 1, wherein said pigment is a pigment that has been subjected to kneading treatment.

Claim 17. (previously presented) The pigment dispersion according to claim 1, wherein said pigment is a pigment that has been prepared using a bead mill or an impact jet mill.

Claim 18. (previously presented) The pigment dispersion according to 1, wherein the

pigment dispersion has been subjected to ion exchange treatment or ultra-filtration.

Claim 19. (currently amended) The pigment dispersion according to claim 1, wherein an epoxy resin having a glycidyl ether as a backbone thereof, or a resin having oxazoline groups has been added to the pigment dispersion as a crosslinking agent.

Claim 20. (original) The pigment dispersion according to claim 19, wherein said crosslinking agent is a resin that reacts with carboxyl groups.

Claim 21. (previously presented) The pigment dispersion according to claim 19, wherein the amount added of said crosslinking agent is in a range of 1 to 50 wt% relative to said urethane resin.

Claim 22. (original) The pigment dispersion according to claim 21, wherein said urethane resin has a weight average molecular weight (Mw) after reaction with said crosslinking agent of at least 10,000.

Claim 23. (currently amended) The pigment dispersion according to claim 19, wherein the amount added of said crosslinking agent is such that an effective solid component weight ratio (weight of crosslinking agent / (total weight of copolymer resin between hydrophobic monomer and hydrophilic monomer, and urethane resin)) is in a range of 0.5/100 to 50/100.

Claim 24. (previously presented) An ink composition, containing at least the

pigment dispersion according to claim 1, and an aqueous medium.

Claim 25. (original) The ink composition according to claim 24, wherein said aqueous medium contains a penetrating solvent, a wetting solvent, and/or a surfactant.

Claim 26. (original) The ink composition according to claim 25, wherein said penetrating solvent is an alkanediol and/or a glycol ether.

Claim 27. (previously presented) The ink composition according to claim 25, wherein said wetting solvent is a polyhydric alcohol.

Claim 28. (previously presented) The ink composition according to claim 25, wherein said surfactant is acetylenic glycol and/or a polysiloxane.

Claim 29. (previously presented) The ink composition according to claim 24, characterized by further containing an alkanolamine or an alkylamine as a pH adjuster

Claim 30. (previously presented) The ink composition according to claim 24, wherein the ink composition has a pH of at least 8.0, a pigment maximum particle diameter of not more than 0.3  $\mu\text{m}$ , and a pigment 50% cumulative dispersed diameter of not more than 0.15  $\mu\text{m}$ .

Claim 31. (previously presented) The ink composition according to claim 24, wherein the content of said pigment is not more than 10 wt% of the ink composition.

Claim 32. (previously presented) An ink set, comprising at least the ink composition according to claim 24.

Claim 33. (currently amended) A method of manufacturing a pigment dispersion according to claim 1, comprising:

a pretreatment step of making a ~~pigment~~ particle diameter of the pigment minute and uniform through kneading treatment or chipping treatment;

a dispersion step of adding a the copolymer resin between a the hydrophobic monomer and a the hydrophilic monomer, and then dispersing the pigment using a bead mill or an impact jet mill; and

an after-treatment step of further adding the a urethane resin and a crosslinking agent and carrying out crosslinking treatment.

Claim 34 (new). A pigment dispersion, comprising at least a pigment, an aqueous medium, a copolymer resin between a hydrophobic monomer and a hydrophilic monomer, and a urethane resin,

wherein said urethane resin has urethane linkages and/or amide linkages, and acidic groups.

Claim 35 (new). A pigment dispersion, comprising at least a pigment, an aqueous medium, a copolymer resin between a hydrophobic monomer and a hydrophilic monomer, and a urethane resin,

wherein an epoxy resin having a glycidyl ether as a backbone thereof, or a resin having oxazoline groups has been added to the pigment dispersion as a crosslinking

agent,

*and*

wherein said crosslinking agent is a resin that reacts with carboxyl groups.